

TWO NEW SPECIES OF TRYPETINAE FROM GUANGDONG, CHINA (DIPTERA, TEPHRITIDAE)

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Abstract Two new species of subfamily Trypetinae, *Carpophthoracidia bivittata* Xu & Liao, sp. nov. and *Diarrhagna bimaculata* Xu & Liao, sp. nov., are described from Zhuhai, Guangdong, China. Illustrations of new species are given.

Key words Tephritidae, *Carpophthoracidia*, *Diarrhagna*, new species, Guangdong.

Specimens of two new tephritid flies have been found in Zhuhai, Guangdong, China that belong to genus *Carpophthoracidia* and *Diarrhagna*, respectively. *Carpophthoracidia* include only one known species from East Asian region which is similar to genus *Carpophthorella* in wing pattern (Wang, 1996). Morphological terminology generally follows McAlpine (1981) and Drew *et al.* (1998). Length of body and wing is measured in millimeters. The type specimens are deposited in Zhuhai Entry-Exit Inspection and Quarantine Bureau (ZHIQ), Zhuhai, China.

Systematics

Genus *Carpophthoracidia* Shiraki

Carpophthoracidia Shiraki, 1968: 31. Type species: *C. matsumotoi* Shiraki, 1968, by

Carpophthoracidia bivittata sp. nov. (Figs. 1-4)

Description. Male, length of body 2.7-3.6 mm; length of wing 2.6-3.4 mm.

Head. Frons yellow to fulvous. Lunule fulvous. Ocellar triangle black and vertex yellow to fulvous. Face yellow. Parafacial and genae yellow to fulvous. Occiput brown. Antenna yellow; 3rd segment relatively short *ca.* 0.26 mm; arista short pubescent. Head setae black: 3 pairs of frontal and 1 pair of orbitals; 1 pair of inner vertical, 1 pair of outer vertical and 1 pair of genal setae; ocellars moderately developed, about as long as orbitals.

Thorax. Scutum shining black, with 2 longitudinal reddish yellow vittae between dorsocentral setae (Fig. 1). Postpronotal lobes entirely white with 1 pair of setae. Dorsocentrals situated in line with postsutural supraalar. Scutellum white to yellow with 2 pairs of scutellar setae. Legs entirely yellow; fore femur with a row of posteroventral setae, mid tibia with a strong apical spur. Wing pattern similar to that of genus *Carpophthorella*, with a broad dark brown costal band which extends from base to apex of cell r_{4+5} and 2 transverse dark brown bands, namely subapical band and preapical band, unconnected in cell r_{4+5} (Fig. 2); vein R_{4+5} with few dorsal setulae at base; lobe of cell bcu relatively short.

Abdomen. Tergites 1-2 yellow; tergites 3-5 with

black band across anterior margin except that a yellow longitudinal stripe medially. Outer surstylus bifurcated apically, preniseta with two teeth (Fig. 3).

Female. Most of morphological details are similar to male except abdominal tergite 1 yellow, tergite 2 with a brown band across anterior margin, tergites 3-6 dark brown. Aculeus acute, serration laterally (Fig. 4).

Etymology. From the Latin words *bivittatus* referring to the two longitudinal reddish yellow vittae present on scutum.

Holotype ♂, Wanzai (22° 13' N, 113° 28' E), Zhuhai, 8 Apr. 2008, YU Guo-Quan. **Paratypes:** 1 ♂, 6 ♀ same data as holotype; 1 ♂, Gaolan (21° 54' N, 113° 13' E), Zhuhai, 23 May 2003, CHEN Ji-Pu.

Distribution. China, Guangdong (Zhuhai).

Host. Unknown.

Remarks. This species is similar to *C. matsumotoi* Shiraki, 1968, from Ryukyu Is., Japan, but is clearly distinguishable from the latter by scutum with only 2 longitudinal reddish yellow vittae (4 vittae in *C. matsumotoi*).

Genus *Diarrhagna* Bezzi

Diarrhagna Bezzi, 1913: 108. Type species: *Dacus modestus* Fabricius, 1805, by

Diarrhagna bimaculata sp. nov. (Figs. 5-10)

Description. Male, length of body 6.0-6.5 mm; length of wing 5.2-5.6 mm.

Head. Frons yellow without dark markings, lunule yellow. Ocellar triangle black and vertex yellow, face yellow. Parafacial and genae yellow to fulvous. Occiput brown with yellow along eye margin; occipital row with *ca.* 11 fine black setulae. Antenna yellow; 3rd segment about twice as long as 2nd segment; arista plumose. Head setae black: 2 pairs of strong frontal and 2 pairs of orbital setae; 1 pair of inner vertical, 1 pair of outer vertical.

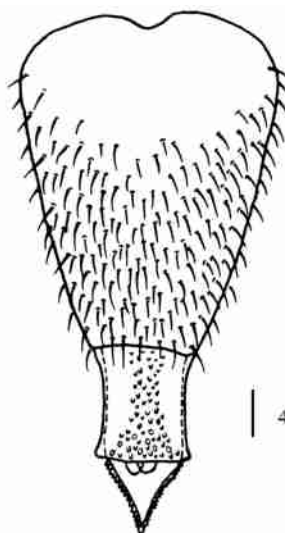
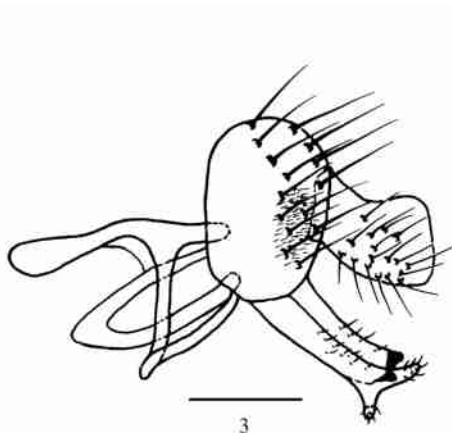
Thorax. A large, bare, white area extending over entire scutellum, posterior portion of scutum (Fig. 5), and from postpronotal lobe to katepisternum (Fig. 7); the intermediate pair of scutellars well developed,

subequal in length to the apical; dorsocentral setae situated slightly behind the line with postsutural supracoxal setae.

Wing predominantly brownish with a few hyaline indentations from margin and 2 small hyaline spots in cell r_{4+5} , cell sc comparatively short, about $1/2$ as long as cell

c (Fig. 6). Legs entirely yellow; mid tibia with 2 large apical spurs.

Abdomen. Tergites 1-2 yellow; tergites 3-5 with a black band across posterior margin and protruded medially; outer surstylus protruded apically, preniseta with two small teeth (Fig. 9).



Figs 1-4. *Carpophthoraidia bivittata* Xu & Liao, sp. nov., 1. Male adult in dorsal view. 2. Male wing. 3. Male terminalia. 4. Female terminalia. Scale bars: 1-2 = 1 mm, 3-4 = 0.1 mm.

Female. Most of morphological details are similar to male except wing with 2 moderate hyaline spots in cell r_{4+5} (Fig. 7). Aculeus relatively short, rounded apically with 4 prenisetae (Fig. 10).

Etymology. From the Latin words *bi* + *maculatus* referring to the wing with two small hyaline spots in cell r_{4+5} .

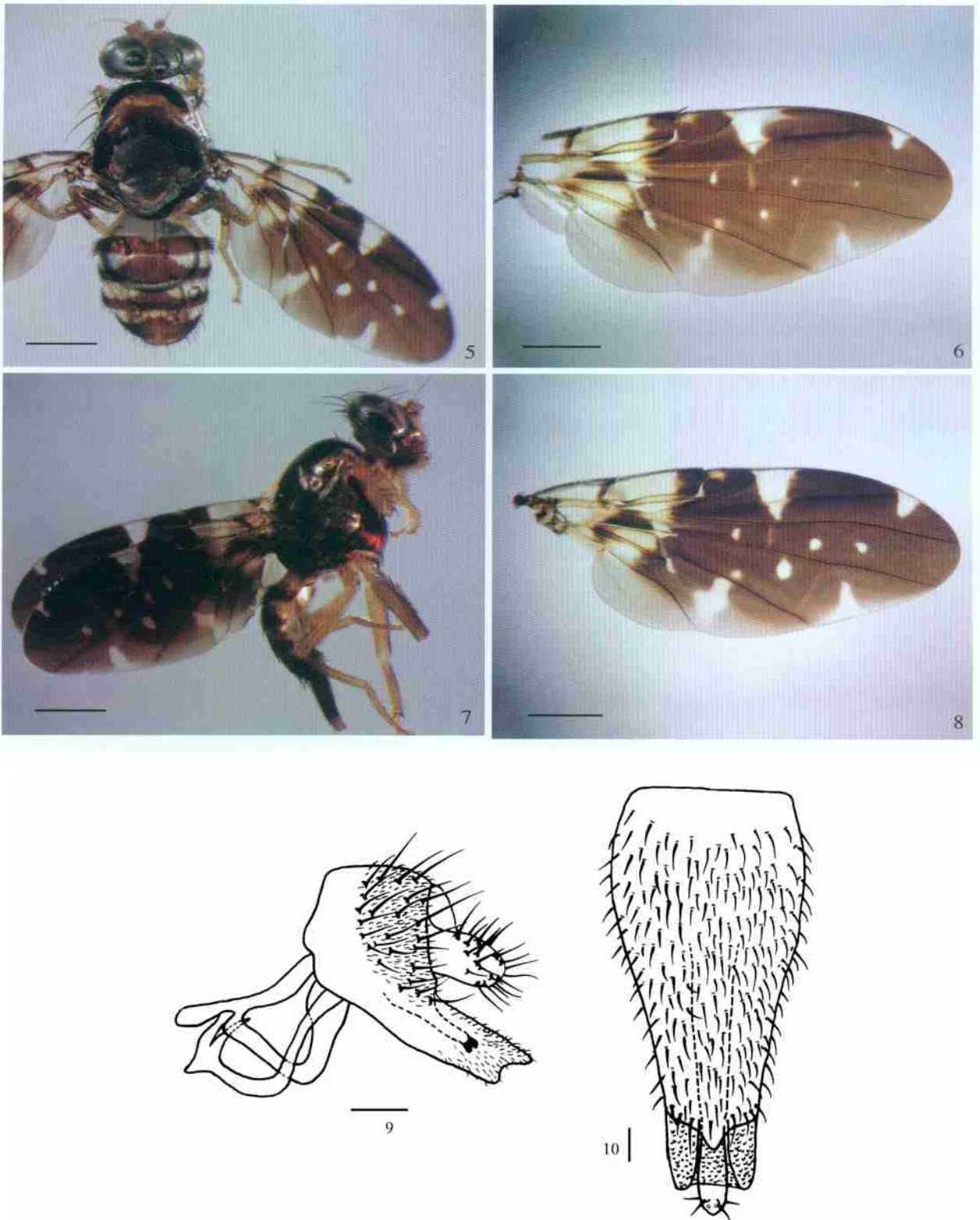
Holotype ♂, Wanzai ($22^{\circ} 13' N$, $113^{\circ} 28' E$), Zhuhai, Guangdong, China, 14 May 2008, LI Jie. Paratypes: 2 ♂♂, 2 ♀♀ same data as holotype;

4 ♀♀, Hengqin ($22^{\circ} 08' N$, $113^{\circ} 32' E$), Zhuhai, China, 8 May 2008, YU Guo Quan.

Distribution. China, Guangdong (Zhuhai).

Host. Unknown.

Remarks. This species is very similar to *D. modestum* in most morphological details, which recorded only from India (Wang, 1996). But it differs from the latter chiefly by wing having 2 small hyaline spots in cell r_{4+5} ; wing pattern shows little sexual dimorphism (Figs. 6, 8).



Figs 5-10. *Diarrhagma bimaculata* Xu et Liao, sp. nov. 5. Male adult in dorsal view. 6. Male wing. 7. Female adult in lateral view. 8. Female wing. 9. Male terminalia. 10. Female terminalia. Scale bars: 5-8= 1 mm, 9 10 = 0.1 mm.

Key to species of genus *Diarrhagma* Bezzi from East Asian Region

- 1. Male wing lacking hyaline spot in cell r_{4+5} ; hyaline spots in cells dm and r_{2+3} very small and indistinct. *D. paritii*
- Male wing with hyaline spot in cell r_{4+5} 2
- 2. Male wing with only 1 hyaline spot in cell r_{4+5} *D. modestum*

Male wing with 2 hyaline spots in cell r_{4+5}
..... *D. bimaculata* sp. nov.

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广东实蝇亚科二新种描述 (双翅目, 实蝇科)

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摘 要 描述了广东珠海市的实蝇 2 新种: *Carpophthoracidia bivittata* sp. nov. 和 *Diarhegma bimaculata* sp. nov.。

关键词 实蝇科, *Carpophthoracidia*, *Diarhegma*, 新种, 广东.

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